

## Clinical Characteristics and Antibiotic Resistance of Mycoplasma Pneumoniae Pneumonia in Gyeongnam, Korea in 2024

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**Abstract :** A total of 151 children admitted to a secondary hospital in Gyeongnam, South Korea, with respiratory infection caused by *M. pneumoniae* from January to November 2024 participated in this study. Of the 151 patients, 52% were boys, and the median age was 13.2 years (interquartile range: 7.8 - 15.6 years). The average duration of fever before hospitalization was 4.7 days ((interquartile range: 3.5 - 6.4 days). *M. pneumoniae* infection was confirmed through ELISA with a more than 4-fold increase in *M. pneumoniae* antibody values compared to the 5-day interval. Antibiotic resistance was measured by whether clinical improvement occurred after taking macrolide (roxithromycin) for 3 days. Of the 39 patients showing antibiotic resistance, 37 patients were administered doxycycline for 14 days, and 2 patients developed vomiting and rashes after taking doxycycline, so the medication was changed to levofloxacin. The antibiotic-resistance group presented significantly longer febrile days compared to the no-resistance group ( $P = 0.006$ ). The number of febrile days after macrolide treatment was also longer in antibiotic resistance group than in no resistance group ( $P = 0.058$ ). Patients who received doxycycline early, within 3 days, improved faster than those who received it later ( $P=0.008$ ). This study aims to analyze the clinical characteristics and antibiotic resistance of *Mycoplasma pneumoniae pneumonia* (MP) patients in Gyeongnam, Korea, providing valuable information for the management of patients with MP. Macrolide antibiotic resistance is gradually increasing, and it was found that switching to doxycycline or levofloxacin within 3 days of taking macrolide was helpful for clinical improvement.

**Keywords :** mycoplasma pneumoniae, macrolide, antibiotic resistance, macrolide resistance

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